All COR ISO Recommendations

Latent Condition, Seismic and ISS

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Type	Rec #	ABU	Unit	Year (I/R)	LC or ISS Question #	LC Question ISS Question Seismic Area	Observation	Recommendation	Resolution	Due Date	Assigned To	Status
Latent Condition	592	D&R	#4 CRUDE UNIT	2009	1-5	Do operators have sufficient knowledge to safely operate or shutdown the unit in emergency situations where they must assume manual control?	Senior operators have sufficient knowledge to safely operate or shutdown the unit in emergency situations where they must assume manual control. Concern is that it is primarily senior operators shutdown the unit. Thus, other operators do not have the opportunity to acquire shutdown experience, and control simulation is inadequate for training.	Consider improving Crude Unit simulator for shutdown/emergency training, and ensure that operators are given ample simulator training time.	Declined: Latent Condition Items 592 and 593 will be resolved and tracked by the implementation of Transition Management (on-going GM improvement process). Release 3 will apply to start up and shutdown for #4 Crude.	12/1/2010	Curry, David P.	Completed
Latent Condition	593	D&R	#4 CRUDE UNIT	2009	2-11	Are procedures difficult to use?	Consistency in the quality of procedures is a concern. This is especially an issue with startup and shutdown procedures. The need for improvement is recognized, and efforts to correct this are ongoing.	Consider evaluation of current #4 Crude Unit procedures for accuracy and consistency, particularly startup and shutdown.	Declined: Latent Condition Items 592 and 593 will be resolved and tracked by the implementation of Transition Management (on-going GM improvement process). Release 3 will apply to start up and shutdown for #4 Crude.	12/1/2010	Curry, David P.	Completed
Latent Condition	594	D&R	#4 CRUDE UNIT	2009	3-2	Are remote switches for different systems separated by sufficient distance to prevent operation of the wrong system during stressful situations?	The wrong furnace has been chopped in the past as two switches are close together. It is possible that a cover over the switch might prevent this.	Consider providing covers over CMC/shutdown switches on #4 Crude Unit control board to prevent operation of incorrect switch during emergency situations.	This was reviewed with control analyst the configuration does not allow for installing covers. Adding covers will not address the congestion of switch panel. Operations will look at need for having all these hand switches and possibly reducing the number of swithces.	12/1/2010	Preciado, Silvano E.	Completed
Latent Condition	595	D&R	#4 CRUDE UNIT	2009	3-13	Are all equipment labels (e.g., vessels, piping, valves, instrumentation, etc.) easy to read (clear and in good condition)?	Not all equipment labels are perfectly clear (oily, dirty, broken, absent). In particular, lines at the plot limit are inadequately identified.	Consider review of labels in #4 Crude Unit, especially lines at the plot limit. Review should include compliance with RI-302 (Color Identification and Labeling of Equipment and Pipelines).	Pumps have all been labeled, 90% of lines at PLM are labeled, suction piping on common spare pumps (ie P1129a, P1149a, etc).	12/1/2010	Preciado, Silvano E.	Completed
Latent Condition	596	D&R	#4 CRUDE UNIT	2009	4-58	Does the location of emergency personal protective equipment (e.g., fire gear, SCBA, acid suits, etc.) allow for rapid access and use?	Emergency PPE is conveniently located. However, there is a concern that there is an insufficient number of SCBA to protect control room personnel.	Consider evaluating number of SCBA units in control room to protect all control room personnel in D&R control room.	Conducted survey with area safety rep and identified 10 SCBA's inside the control room this will support 5 teams of two. CFD provides rapid response to handle emergecies the expectation for ops is to evacuate and take defensive position. The control room is shelter in place building.	12/1/2010	Preciado, Silvano E.	Completed

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ISS	6517	D&R	#4 CRUDE UNIT	2009	4A2	Simplified control displays?	Concern is that some control displays are cluttered, and finding a necessary screen may be time-consuming, especially during an upset.	Consider evaluating simplifying individual DCS screens, and organization of screens to improve control navigation within the #4 Crude Unit. Examples include, but are not limited to: Process Overview, Flash Drum V-1102, Long Loop, Short Loop, Vacuum Column	Declined. Displays are organized well, any organizational system will require time and effort to learn by a control operator. Displays are divided into categories of varying detail. Dense overview displays are provided for routine monitoring over large sections of the plant, which require many tags. There is also a concern that operators who know where to find a tag presently will be unable to do so after modification, which will actually create a much worse situation that the one that is wrongfully thought to exist here.	12/1/2010	Griffin, Charles T.	Completed
ISS	6523	D&R	#4 CRUDE UNIT	2009	4A8	Passive rather than active controls?	T-1108 Ammonia Tank, V-1106A Demulsifier Chemical Injection Drum, T-1104 Caustic Injection Tank have no spill containment.	Consider spill containment for T-1108 Ammonia Tank, V-1106A Demulsifier Chemical Injection Drum, T-1104 Caustic Injection Tank.	Declined: There is also only a limited quantity of material that could be released in each of scenarios. In the event of a spill, the material would be contained to a paved area with process drains. No further follow-up necessary.	12/1/2010	Curry, David P.	Completed
ISS	6552	D&R	#4 CRUDE UNIT	2009	4A19	Limit manual operations – like sampling, hose handling, filter cleaning?	Concern is that the current resid and desalter sampling methods may result in personnel exposure/injury to hot material containing benzene.	Consider evaluating current resid and desalter sampling procedures and replacing with safer alternatives. Reference MOC 19620, improvement of desalter triline sampling, in progress.	The desalter sample improvements have been completed per EWO (improved eductor, temp indicator, etc). Resid sample had some general repairs and operators have resumed sampling weekly with no issues reported.	12/1/2010	Preciado, Silvano E.	Completed
Seismic	570	D&R	#4 CRUDE UNIT	2009		V-1190	Spalled concrete & corroded rebar on pedestal column. 8/19-pic 1	Remove loose concrete near rebar and repair concrete. Notify engineer if corroded rebar diameter is less than 90% of original.	Inspected area, verified rebar diameter and repaired concrete.	12/1/2010	Lee, Gerald W.	Completed
Seismic	571	D&R	#4 CRUDE UNIT	2009		V-1190	North end ladder missing anchor bolt. 8/19-pic 1	Install equal size anchor bolt 1.5" left. Use Simpson Strong Bolt or Hilti Kwik Bolt TZ embed 3".	Anchor bolt has been replaced pre recommendation.	12/1/2010	Lee, Gerald W.	Completed
Seismic	572	D&R	#4 CRUDE UNIT	2009		E-1107 A/B	Anchor bolt nuts too high. 8/19-pic 6	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	573	D&R	#4 CRUDE UNIT	2009		E-1107 A/B	Spalled concrete north end pedestal. 8/19-pic 7	Repair concrete.		12/1/2010	Lee, Gerald W.	Completed

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Seismic	574	D&R	#4 CRUDE UNIT	2009		E-1106	Cracked pedestal and missing grout. 8/19-pic 8	Expose rebar at crack and check for corrosion. Notify engineer if corroded rebar diameter is less than 90% of original. Repair concrete and grout.		12/1/2010	Lee, Gerald W.	Completed
Seismic	575	D&R	#4 CRUDE UNIT	2009		E-1103	North end anchor bolts too high. 8/19-pic 9	Run nuts down.		12/1/2010	Lee, Gerald W.	Completed
Seismic	576	D&R	#4 CRUDE UNIT	2009		V-1103	Cracks in fireproofing at junction with insulation - possible corrosion. 8/19-pic 10	Remove fireproofing in small spots, check for corrosion and repair fireproofing.	All weld repairs to the V-1103 skirt are complete and fireproofing is being replaced.	12/1/2010	Lee, Gerald W.	Completed
Seismic	577	D&R	#4 CRUDE UNIT	2009		Fin Fans	Tension brace cut and used as pipe support. 8/19-pic 11	Provide bracing. Consider reroute of pipe.	Provided bracing per recommendaton.	12/1/2010	Lee, Gerald W.	Completed
Seismic	578	D&R	#4 CRUDE UNIT	2009		Fin Fans	Badly cracked fireproofing at base of many fin fan columns. 8/19-pics 12 through 15	Replace fireproofing using reinforcing wire mesh to keep it intact.	Replaced fireproofing per recommendation.	12/1/2010	Lee, Gerald W.	Completed
Seismic	579	D&R	#4 CRUDE UNIT	2009		V-1100 Deck Structure	Fireproofing missing at junction of two beams at NW corner. 8/19-pic 16	Remove some of the fireproofing, check for corrosion of the structural steel and replace fireproofing.	Inspected area, verified no excessive corrosion present, and replaced fireproofing per recommendation.	12/1/2010	Lee, Gerald W.	Completed
Seismic	580	D&R	#4 CRUDE UNIT	2009		Structural Columns near V-1104	Cracked and spalling fireproofing. 8/27-pics 1 through 3	Remove some fireproofing to check for corrosion, replace same and repair cracks.	Inspected area, verified no excessive corrosion present, and repaired fireproofing per recommendation.	12/1/2010	Lee, Gerald W.	Completed
Seismic	581	D&R	#4 CRUDE UNIT	2009		C-1104	Spalled fireproofing at base. 8/19-pic 4	Remove some fireproofing to check for corrosion and replace same.	All work complete and record can be signed-off. This record number refers to Picture #4 from 8/19, and specifies removal of fireproofing and inspection, however, it was determined on the field walk with Al Greene that the actual issue was nut engagement. Al Greene has reviewed his records and found that this location has Elocone nuts, so nut engagement is not an issue and no fireproofing removal will be necessary.	12/1/2010	Lee, Gerald W.	Completed
Seismic	582	D&R	#4 CRUDE UNIT	2009		C-1140	Spalled fireproofing at base. 8/19-pic 5	Remove some fireproofing to check for corrosion and replace same.		12/1/2010	Lee, Gerald W.	Completed
Seismic	583	D&R	#4 CRUDE UNIT	2009		F-1100B, F-1160	Cracked and spalled conrete at anchor bolts. 8/27-pics 6 through 11	Repair concrete.		12/1/2010	Lee, Gerald W.	Completed

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Seismic	584	D&R	#4 CRUDE UNIT	2009		V-1160 A/B	Missing bolts. 8/27-pic 12	Install bolts		12/1/2010	Lee, Gerald W.	Completed
Seismic	585	D&R	#4 CRUDE UNIT	2009		C-1160 Transfer Line	Vibrating brace. 8/27-pic 13	Inspect brace. Adjust or replace as required.	Installed new shock absorbers to eliminate vibration.	12/1/2010	Lee, Gerald W.	Completed
Seismic	586	D&R	#4 CRUDE UNIT	2009		E-1188	South end anchor bolt nuts too high. 8/27-pic 14	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	587	D&R	#4 CRUDE UNIT	2009		E-1165B	South end anchor bolts missing. 8/27-pic 15	Install bolts		12/1/2010	Lee, Gerald W.	Completed
Seismic	588	D&R	#4 CRUDE UNIT	2009		E-1110B	North end anchor bolts loose. 8/27-pic 16	Tighten anchor bolts		12/1/2010	Lee, Gerald W.	Completed
Seismic	589	D&R	#4 CRUDE UNIT	2009		E-1109	South end anchor bolts too high. 8/27-pic 17	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	590	D&R	#4 CRUDE UNIT	2009		E-1108C	North end anchor bolts too high. 8/27- pic 18	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	591	D&R	#4 CRUDE UNIT	2009		E-1113	South end anchor bolt nuts too high. 8/27- pic 19	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	592	D&R	#4 CRUDE UNIT	2009		E-1115	South end anchor bolt nuts too high. 8/27- pic 20	Run nuts down		12/1/2010	Lee, Gerald W.	Completed
Seismic	593	D&R	#4 CRUDE UNIT	2009		E-1116B	South end anchor bolts loose. 8/27- pic21	Tighten bolts		12/1/2010	Lee, Gerald W.	Completed
Seismic	594	D&R	#4 CRUDE UNIT	2009		V-1198	Inadequate nut to anchor bolt engagement both ends. 8/27- pics 22 & 23	Replace existing nuts with Elocone nuts or equivalent.	Replaced nuts per recommendation.	12/1/2010	Lee, Gerald W.	Completed